Abstract

A method for designing automobile seat assemblies in which a sled test is run on a prototype seat assembly in order to obtain the necessary data to model the seat assembly with simulation software. A basic model of the surface of the seat assembly is built utilizing simulation software and tests are run on various parameters to determine those that are most significant to the desired objective of the design process. Thereafter, the software is used to build a detailed model of the seat assembly and all its elements and the significant parameters are tested further to determine those that are again most significant to achieving the desired outcome. Once optimization ranges for those most significant parameters are chosen, the prototype seat assembly is modified accordingly. A final sled test is run on the modified prototype to verify the results and compare those results with the original sled test results.